

The People and The Railroads

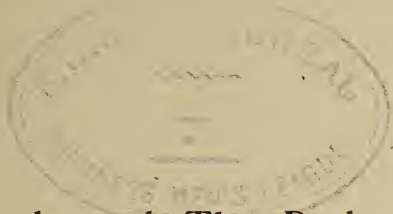
Official Facts Concern-
ing the Transportation
Situation in the Country
in General and in the
Northwest in Particular



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The People and The Railroads

Complaint of Congestion and Inadequate Service is
General—Reasons why Carriers do not Meet all
Demands—The Problem is not Local, but National.

All over the United States railroad trains are delayed, yards are crowded with freight that cannot be delivered, the grain and the raw cotton of the farmer cannot be shipped, the coal and merchandise designed for local consumption move slowly from the central markets. The people suffer in their comfort and in their pockets. They cry out against a condition that injures them. This is human nature.

Not infrequently their remonstrance takes the form of bitter accusation against the railroad companies and a demand for legal remedy. This, too, will be right if it can be shown that the difficulties experienced arise from inefficient or indifferent management, and that they are such as any legislative action can remedy. It is all a question of fact. No trouble is ever mended, no abuse ever set right, in farming or manufacture or commerce or transportation, until the cause is located. The first step, therefore, toward a betterment of existing conditions is to learn how they have come to be what they are.

It is worth while to look briefly but closely at the facts.

With every increase of the products of human activity, an added burden is laid upon the carriers of the country. They must keep pace with progress; and, in plan and execution, anticipate it as far as may be. The last ten years, notably the last five, have seen a growth in every form of industry in the United States that is phenomenal. Glance at some of the items of this unpredictable expansion, every one of which means more work for the railroad systems of the country.

The value of farm products for the country, every pound of which except what is consumed on the farm must be carried by the railroad to market, was as follows:

1890	\$2,466,000,000
1900	4,717,000,000
1905	6,415,000,000
1906	(estimated) 7,000,000,000

The farm contributes to the commerce of the country just about three times what it did fifteen years ago.

Our population has increased about 9,000,000 since the census of 1900. We produced twice as much steel in 1905 as we did in 1900, an increase of about 10,000,000 tons. The increase in pig iron was about 70 per cent in the same time, or 9,000,000 tons. The estimated coal product for 1906 is 150,000,000 tons in excess of 1900.

The petroleum product more than doubled between 1900 and 1905; the 8,482,000 barrels of Portland cement in 1900 became about 40,000,000 last year; the value of the national mineral product rose from \$620,000,000 in 1890 to nearly \$1,400,000,000 in 1906. The cotton mills of the country consumed

3,665,412 bales in 1900, and 4,723,703 bales last year. The value of manufactured products in the United States was:

1890	\$9,372,000,000
1900	\$13,000,000,000
1906	(estimated) \$17,000,000,000

No consideration of the railroad problem can be either adequate or sincere that does not start from these statistics of material growth. For they must be translated into work for the big transportation machine; and by the amount of work laid upon it its operations will be determined.

Now the two obvious facts are that the railroad facilities of the country, more particularly trackage and terminals, have not kept pace with this astounding development in production and exchange of wealth; and that the resulting embarrassment and loss are not local, but universal.

The farmer or merchant of any city or section knows the bitterness of his own trouble and believes it peculiar. But there is congestion on every railroad system within our borders. The wheat grower of the north, the cotton grower of the south, the lumberman of the Pacific Coast, the miner of the west, the manufacturer of the east and the consumer of every state and almost every city sign a bill of complaint against car shortage, delay in shipment and delivery, and consequent financial loss. The figures of growth already presented are the basis of an increase in transportation work to be done by the railroads which, when set side by side with the added facilities for performing the task, furnish a key to the situation. The following statistics are compiled from the official reports of the Interstate Commerce Commission:

	1905	1895	Inc. Per Ct.
Total Single track			
Mileage, U. S.,	218,101	180,657	21
Locomotives,	48,357	35,699	35
Passenger Cars,	40,713	33,112	23
Freight Cars,	1,731,409	1,196,119	45
Number Passengers			
Carried 1 Mile, 23,800,149,436	12,188,446,271		95
Tons of Freight			
Hauled 1 Mile, 186,463,109,510	85,227,515,891		118

That is to say, while the railroad mileage increased in ten years but 21 per cent, a large part of this being the building of branch lines, or roads into new country, that created more business for the trunk lines instead of relieving them, and while equipment was increased to meet new demand by from 23 to 35 per cent, with a much greater efficiency in methods of operation which will be considered later, the passenger business of the country almost doubled and the freight business increased 118 per cent, or by more than the hauling of 100,000,000,000 tons one mile.

Meantime railroad construction not only did not keep pace, but constantly fell off. Following are the mileage statistics, estimating the last year up to June 30th:

	Total Mileage	Increase	Inc. P.Ct.	Inc. p.Ct. Per Annum
1870.	52,898			
1880.	93,671	40,773	77.	7.7
1890.	163,597	69,926	74.6	7.46
1904.	213,904	50,307	30.75	2.19
1906 (estimated)	220,000	6,096	2.8	1.4

A comparison of these figures, dwindling as years go by, with those of business and traffic development already given will state clearly the real problem that looms appallingly before the country; one that has

surprised and almost dismayed railroad men as well as shippers. And the pressure on terminal facilities has been even greater than that on tracks. It is the attempt to draw off water by a pipe one inch in diameter from a reservoir into which is constantly flowing water from a pipe three inches in diameter. With every hour the level rises and the pressure increases. The situation is clearly one of physical limitations that must be overcome if prosperity is to continue. It is national. The only relief from it must be a great addition to trackage on through lines and to terminals. What that involves will be considered later.

II

The Special Contribution of the Northwest to the Problem of National Transportation—Great and Unexpected Additions to Traffic in This Section.

The problem, for both railroads and people, is one created by prosperity. It has to be considered next what share the people of the Northwest have in this situation; how far they have contributed to it, and what has been done to meet the existing conditions and what are the prospects of relief. What are our own roads doing?

Everything that has been said of the growth of the country and of the business in the last ten years holds good of the Northwest. Its percentage of expansion is the highest in the land. More new population has entered the five states from Minnesota to the Pacific Coast than any similar area outside of the large cities. More ground has been cultivated, more forests turned into lumber, more cattle shipped to

market, more mines worked, more farm products sent to market. A few figures tell the tale. Only growth here has been more concentrated into later years. Not a ten, but a five year period will measure the rapidity of Northwestern movement.

The wheat yield of the five states from Minnesota to Washington was 94,816,718 bushels in 1900 and 193,758,982 in 1905. In these five years the increase was a little more than 100 per cent, and there were 100,000,000 bushels more to move. This is not, primarily, a manufacturing section. But in the same five years the value of manufactured products of these states rose from \$419,730,402.00 to \$522,081,-849.00 an increase of nearly 25 per cent. Every item of the traffic sheet shows a similar progress; so that the added demands on the railroads of this section in five years only will compare reasonably with that upon the roads of the whole country in ten. Traffic statistics are explicit.

This territory is served by the Great Northern and the Northern Pacific systems. Here are the figures of work done by the Great Northern during the five years:

	Miles Operated	Passenger Mileage	Revenue Freight Mileage
1900	5,075	195,585,382	2,504,792,882
1901	5,202	214,392,859	2,481,751,195
1902	5,249	286,320,423	3,190,217,482
1903	5,489	323,404,529	3,606,835,176
1904	5,622	325,743,218	3,351,802,089
1905	5,723	335,524,414	4,170,160,658
1906	5,906	402,066,841	4,933,530,997

The corresponding figures for the Northern Pacific are as follows:

	Miles Operated	Passenger Mileage	Revenue Freight Mileage
1900	4,714	255,680,585	2,205,317,271
1901	5,100	308,819,605	2,440,622,665
1902	5,019	406,704,017	3,300,253,137
1903	5,111	473,754,272	3,613,104,118
1904	5,262	483,650,266	3,685,672,022
1905	5,314	488,522,472	4,359,664,201
1906	5,401	659,050,227	5,245,260,080

There are two very notable things about these tables. The first is that the 11,307 miles in the two systems at the end of the seven year period were only 15 per cent more than the 9,789 miles at the beginning, while the combined passenger business of the two systems had increased by 135 per cent, and the combined freight business had made the tremendous leap from 4,710,110,153 to 10,178,791,077 ton miles, or 116 per cent. The issue that overtook the rest of the country in ten years sprang upon the Northwest in about half that time.

As the second point of note, the eye will show that this new era revealed itself only in the last three years. Before that time there was steady increase, with a big jump in the good year between 1901 and 1902. But there was no such ratio of progression as would have taught any man, versed in railroad operations or not, that a high tide was flowing in. It was the unexpected that happened; and therefore it fell upon communities and agencies for the transaction of business partially unprepared.

For example, the number of miles run by freight trains on the Northern Pacific during 1904 was over

200,000 less than in 1903. But the total for 1906 is 5,600,000 in excess of 1901, and, 2,200,000 ahead of 1904. The number of miles run by passenger trains on the road was also slightly less in 1904 than the year previous, but the total for 1906 is over 1,400,000 more than in 1904, and the last six months indicate 9,000,000 train miles for the year 1907, an increase over 1903 of 2,000,000 miles, or 30 per cent.

The same difference appears in statistics of operation, in earnings, all down the line. Apparently the large increase had culminated two years ago, and steady but not overwhelming advances were to be expected. Then came these two years of abounding national productivity that have set a task for all the railroad systems of the country which they have found it impossible to perform to their own entire satisfaction or to that of the public.

While all have been under pressure, this fell most heavily, of course, where development was greatest and additional facilities most difficult to provide;—that is, in the Northwest. By reason of the extent of territory covered, comparative sparseness of settlement and climatic difficulties, together with the fact that this business has to be delivered through terminals already choked, it should be expected that a national congestion would be felt here much more severely than it has.

The wonderful development on the Pacific Coast, as shown by the growth of Seattle, Portland, Tacoma, Everett and other cities, means work for the railroads. The building up of Oriental trade, in which the whole country has been interested, is a burden on the carrier, from which all exports are received and to which all imports must be consigned. But that the traffic increase is general, not local, arising

from prosperity throughout the Northwest and the increase of all its industries, that this is distributed everywhere and all have their share, may be seen from the record of traffic movement on the two great carrier systems, given by operating divisions for 1905 and 1906. The increase for the last year alone presents a problem that any railroad management must acknowledge to be serious. These figures include all freight, of every kind, passing over the lines:

Northern Pacific System.

Name of Division	Ton Miles 1905	Ton Miles 1906
Lake Superior.....	443,349,432	543,473,217
St. Paul.....	310,446,463	374,497,732
Minnesota.....	366,305,477	435,157,229
Dakota.....	420,358,054	502,270,603
Yellowstone	709,197,575	820,403,343
Montana	596,570,601	715,280,829
Rocky Mountain...	601,120,741	712,650,905
Idaho... ..	1,072,191,439	1,304,251,530
Pacific	501,940,187	632,467,349
Seattle	67,919,910	86,061,381

Great Northern System.

Name of Division	Ton Miles 1905	Ton miles 1906
Terminals	4,648,406	4,930,217
Superior	198,218,055	228,658,656
Mesabi	939,769,829	972,115,879
Fergus Falls	367,996,470	400,486,039
Northern	181,842,618	246,361,271
Willmar	384,243,992	487,386,193
Breckenridge	207,412,268	250,856,834
Dakota	249,794,380	305,965,824
Minot	328,762,143	432,378,829
Montana	506,036,494	633,912,394

Name of Division	Ton Miles 1905	Ton Miles 1906
Great Falls.....	46,810,447	64,989,662
Sweet Grass.....	26,616,435	28,920,441
Kalispell	292,649,412	359,229,692
Spokane	316,051,516	413,887,833
Cascade	140,370,276	193,919,274
Montana Central	307,061,096	334,510,786

The problem which these statistics of sudden growth illustrate was one of great magnitude. It was neither wholly unforeseen nor in any way ignored. There are two ways of providing for increase of railroad business, assuming that enough track to carry it is provided: increase of equipment and increase of efficiency in handling. What provision have the carriers of the Northwest made in these respects?

III

The Immense Increase of Traffic in the Northwest Requires Increased Equipment to Handle it Properly—What the Railroads Have Done in This Particular.

It has been shown that the country is suffering from an increase of traffic, due to prosperity, beyond the ability of the railroads, with their present trackage to handle promptly. It has been shown that this increase of business has been especially marked in the Northwest. Upon no railroads in the country has the extra work to be done weighed more heavily than upon the Great Northern and the Northern Pacific. They are to be judged by their efforts to meet the situation; by their preparations in adding to rolling stock and in adopting the most efficient methods of modern transportation. What do the official records show?

First, as to equipment. The roll of locomotives

on the Great Northern stands as follows. It is to be noted that every increase in tractive power, that is the ability to haul a bigger load, counts for just as much as the addition of an equivalent in the number of engines:

Year	Number	Tractive Power	Increase Number	Increase Tract. Pow.	Inc. p. Ct.
June 30, 1901	563	12,930,517	...		
June 30, 1906	786	21,969,021	223	9,038,504	69.9
Dec. 31, 1906	826	23,586,298	40	1,617,277	7.36

The corresponding record for the Northern Pacific is:

Year	Number	Tractive Power	Increase Number	Increase Tract. Pow.	Inc. p. Ct.
June 30, 1901	704	14,441,310	...		
June 30, 1906	1,005	27,677,615	301	13,236,305	91.65
Dec. 31, 1906	1,085	30,726,415	80	3,048,800	8.9

In the five years ended last June these systems had added to their motive power from 40 per cent upwards in number of engines; but the addition to their pulling power, the force available to move trains, was from 70 to 90 per cent. Even this is slow as compared with what has been done within the last six months. When the managements saw trouble ahead, neither money nor energy was spared. Since last June the two systems have added 120 locomotives to their equipment, making an added pulling power of 9.4 per cent on the average. This is at the rate of nearly 19 per cent a year; and at this pace it would require a little more than five years actually to double the motive power of these two railroad systems. If there is still difficulty in doing the business, it cannot be claimed, in this item, that they have not made every effort to meet the situation.

There is an even more remarkable record in respect to cars for carrying the freight of the Northwest. "More cars" is the cry everywhere. Not only have more cars been provided as rapidly as they could be obtained anywhere in the United States, but the

carrying capacity of the average car has been so increased as to add greatly to freight movement by increasing the speed with which they may be transferred, loaded and unloaded. The car record of the Great Northern is as follows:

Year	Number	Tonnage
June 30, 1901.....	22,989	612,691
June 30, 1906.....	33,296	1,041,707
Dec. 31, 1906.....	37,068	1,206,755

For the same dates the official records of the Northern Pacific furnish these figures:

Year	Number	Tonnage
June 30, 1901.....	26,704	693,149
June 30, 1906.....	36,097	1,131,632
Dec. 31, 1906.....	38,283	1,232,382

It will be seen from this that, while nearly 10,000 cars have been added to the equipment of the Great Northern in the five years up to last June, 3,772 have been added since. And the tonnage capacity on the system has been increased by 165,048, or 15.36 per cent in these last six months. This latter would be equivalent to doubling the tonnage capacity of the whole system in a little more than three years; which is a ratio that even the progress of trade and industry could not eclipse or equal.

The addition to actual car equipment on the Northern Pacific is less striking because, while a very large number of cars were ordered during the last year, a portion of them were used to replace inferior equipment, and a large portion of the order the builders failed to deliver at the time contracted for. Of those arranged to be delivered in 1906 there was a shortage of 1,630. Notwithstanding this, its car service shows a good increase; while the total number of cars ordered during the last three years was 17,850, and the actual receipts in 1906 were 4,440 freight cars.

But the main fact is that orders for still further enlargement of equipment have long been placed and are being hurried to the limit of manufacturing ability. The Northern Pacific has ordered for 1907 delivery 6,700 freight cars, (excluding the undelivered portions of last year's contracts mentioned above) 110 passenger train cars and 191 engines, and there are 21 engines due on 1906 deliveries, or a total of 212 engines to come. The Great Northern has ordered for 1907 delivery 150 locomotives, 4,000 eighty-five thousand pound capacity box cars, 1,000 one hundred thousand pound capacity steel ore and coal cars, and orders are being placed for 1,000 additional coal, ore and flat cars.

These enormous figures, far in advance of the most startling traffic increase heretofore, are more effective proof than any argument could be of the alertness and energy of railroad managements. These are not promises made, but orders given, things accomplished. They have not been done under any pressure from without, but with an enlightened forethought and vision of events.

It is forgotten occasionally that it is of the highest moment to the railroad as well as to the shipper to move all freight offered promptly and expeditiously. There can be no loss to one without loss to both. Dividends are not made by permitting cars to stand idle on sidings when there is revenue freight to be hauled, or by allowing them to loaf slowly across the continent while wheat and coal and cattle and lumber and merchandise are demanding transportation at paying rates.

As far as it was possible for human mind to prepare for the great business movement culminating in the fall of 1906, the railroads of the Northwest seem to have done so; and they are still at work, securing extra facilities, fighting every obstacle that delays traffic, promoting efficiency and spending money

wherever money will move freight. The showing of what has been done in changes of equipment and additions to the list is a remarkable one. Examination of another series of facts will show that the people of the Northwest receive, also, in proportion to the railroad mileage existing in this section, a more efficient service than is rendered elsewhere in the country.

IV

Locomotives and Cars Must be so used as to Obtain From Each Unit of Equipment the Largest Possible Amount of Work—Density of Traffic.

It appears, from official records given, that the railroad systems by which the Northwest is principally served have been adding to their rolling stock in proportion to the demands upon it. Cars and engines have been and are being purchased in quantities sufficient to take care of increased traffic. One other factor should now be considered: the actual work done by each unit of equipment, the service obtained from each mile of track. For it is clear that efficiency of service depends not only upon provision of ample facilities, but also upon the skill, intelligence and energy with which these facilities are employed to the limit of their capacity. An amply equipped road will fall short of its duty if not properly operated.

Successful operation means getting out of track and rolling stock the largest amount of work that they can perform with safety and without congestion or delay. How about the use of freight cars, in which the people are most directly interested? A rough measure of the work done may be obtained by dividing the total freight mileage, which means the number of tons of paying freight carried one mile during the

year, by the number of freight cars. This will show the contribution of each item of freight car equipment; be a fair measure of what each system gets out of each car in the way of service to the public. Obviously, the more tons of freight each car carries in a year, the more service is rendered to the shipper. Here is the official record:

Year.	System.	Freight Ton Miles		
		No. Freight Cars.	Total.	Miles per Car.
June 30, 1905	Total U. S.	1,731,409	186,463,109,510	107,693
" " "	G. N.	31,567	4,170,160,658	132,105
" " "	N. P.	35,135	4,359,664,201	124,083
" " "	C. M. & St. P.	41,311	4,081,408,559	98,797
" " "	N. Y. C.	65,410	8,421,437,108	128,748
June 30, 1906	G. N.	33,296	4,933,530,997	148,171
" " "	N. P.	36,097	5,245,260,080	145,310
" " "	C. B. & Q.	50,360	6,347,902,891	126,050

The conclusion from these figures is clear. The manufacturer who secures the largest gross output from each machine, the farmer who harvests the largest number of bushels from each acre, other things being equal, is making the best use of his implements and getting the most return for his labor. It appears from the official reports of the Interstate Commerce Commission that the average number of ton miles, that is of tons of freight carried one mile, for each freight car run in the whole United States in the year ended June 30, 1905, was 107,693. That is what the freight car, regarded as a machine, produced. In the same year each freight car on the Great Northern averaged 132,108 tons one mile, and on the Northern Pacific 124,083.

Two other roads are cited for comparative purposes, the figures being taken from Poor's Manual of Railroad Statistics, the national authority. Among western systems, the Chicago, Milwaukee & St. Paul, with the advantage of a more thickly settled territory, carried 98,797 tons one mile per car; while among eastern roads the New York Central system, running between the two greatest cities of the country,

through a heavily populated region and with an almost level track, carried 128,748. The people of the Northwest have had from each unit of the equipment placed at their service the largest amount of actual use. The figures for the year ending June 30, 1906, show a still further advance. For this year the excess of tons carried per car in this section over the record for the whole United States in 1905 is over 35 per cent.

So much for the efficiency of one unit of equipment. Now how about the amount of work done for each mile of track? For that is just another side of the same question. Transportation is limited by the amount of track, the amount of equipment and terminal facilities. And it will be well to see how the mileage of the Northwest has been used; how much business has been carried over it as compared with other parts of the country. This is another kind of measurement. It is known as "density" of traffic.

By density of freight traffic is meant the amount of business actually done for each mile of road. It is obtained by dividing the whole number of freight tons, that is the number of tons of freight carried one mile, by the whole number of miles in the system. This obviously will show how busy each mile has been kept. It tells in another way how much work has been got out of the second part of this big machine, its roadbed, rails and switches.

And here it is clear more than ever that physical conditions should be taken into account. Density of traffic is tremendously affected by density of population; by the massing of business. For if two cities are only 100 miles apart and the number of tons of freight moved one mile between them is 100,000, then 1,000 tons must move over each mile. But if the cities are 1,000 miles apart, with the same ton mileage, only 100 tons would move over each mile. The density would be ten times as great in one case

as in the other, although as a working proposition it is clearly easier to carry condensed business over short distances than to pick up small lots of business scattered over a long route. Hence density of traffic is generally much higher in the old and thickly settled parts of the country, and might be expected to fall to a low figure in the newer portions and where settlement and business are comparatively sparse. Here is a table of densities, compiled from annual reports for the year ending June 30, 1906.

Name of Road	Average Miles Operated	Freight Ton Mileage	Density
C. M. & St. P.	6,961	4,663,808,007	669,965
C. & N. W....	7,428	5,156,074,115	694,068
C. B. & Q.	8,896	6,347,902,891	713,568
C. R. I. & P. ...	7,218	3,715,621,556	514,766
Soo Line.....	2,020	1,084,153,866	536,605
G. N.	5,906	4,933,530,997	835,287
N. P.....	5,401	5,245,260,080	971,139

For the year 1905, four eastern systems give the following figures, showing how greatly density is affected by concentration of business:

Name of Road	Average Miles Operated	Freight Ton Mileage	Density
Penn., Pa.R.R.			
Division.	1,817	11,515,465,537	6,337,625
Penn. Ry. Co. . .	3,839	16,835,485,241	4,398,407
Lake Shore ...	1,520	5,099,918,804	3,355,209
N. Y. Central ..	3,774	8,421,437,108	2,231,435

The Pennsylvania has four tracks, so has the New York Central. The Lake Shore & Michigan Southern has two. Yet there are many divisions in the Northwest where these records are equaled in the busy months every year. On the Mesabi Division of the Great Northern, 115 out of 295 miles being double track, if the business done last October were

taken as the standard, the density for the year would be nearly 7,000,000. On the Lake Superior Division there was a showing at the rate of 2,800,000 freight tons miles per annum. And for the same month the average of the Montana Division would give over 1,800,000 miles for the year.

On the Minnesota Main Line of the Northern Pacific, from Staples to Fargo, the traffic in October last showed a density for the month of 461,000 miles, which is at the rate of over 5,500,000 per annum. Taking the same month as a standard, the density for the year on the Montana Division between Billings and Helena, with a grade of 116 feet to the mile and a tunnel to pass through, would be 3,500,000. From Helena to Missoula, over the main range of the Rocky Mountains and through another tunnel, it would be the same. From Spokane to the foot of the Cascade Mountains it would be 3,600,000; and between the Yakima Valley and Puget Sound, over the Cascade range, with a grade of 116 feet to the mile, the density falls but little below 4,000,000.

Here are single track roads, running through a country still but partially developed, crossing the backbone of the continent, passing through tunnels where trains have to wait their turn, with long and heavy grades in the mountain region, fighting snow blockades during several months in the year, confronted by pretty nearly every obstacle known to railroading, and they show a density of traffic from 30 to 90 per cent in excess of other western systems. If the service given to the people of this section is still below their requirements, it is at least certain that operating efficiency has been pushed to the highest point achieved in this or any other country.

With equipment increasing as rapidly as money can secure it, with each car and engine doing maximum work and each mile of track carrying the maximum load, railroad managements can hardly be

accused with fairness of apathy or neglect. Now what does all that has been done mean in dollars and cents; what money has been spent and what must be expended in the near future in the way of necessary additions and improvements?

V

The Financial Burden of these years of Growth— Earnings Have Been Put into Improvements and Equipment—What it costs to Keep up with the Times.

A strange idea prevails in some quarters that a railroad possesses as a part of its outfit a lamp of Aladdin, which it has only to rub in order to have wealth uncounted placed at its disposal. This is due, doubtless, to the large figures in which the business necessarily is expressed. But the time is still fresh in memory when one-fourth of the entire railroad properties of the United States had passed into the hands of receivers. That time may come again, or it may not. One thing is sure; that when this thing happened, the people of the country were not as prosperous and contented as they have been since railroad companies began to pay dividends. They were, on the contrary, in even worse condition than the railroads themselves.

An examination of railroad reports will show two things: first, that the increase in earnings has been recent, sudden and may not be permanent; second, that the increase in expenditure, for the betterment of properties and the improvement of service, has followed instantly, with the railroad systems of the Northwest, upon a secured financial showing of net earnings. The amount expended by these roads, the amounts which they are preparing to spend for the accommodation of traffic, the safety of the public and

the meeting of those demands that the future is sure to make upon them, have not been brought to the knowledge of the general public. Again the official figures will speak for themselves.

It was not until less than three years ago that the balance sheets of these roads gave any warrant for a liberal outlay. The lean years of the past had taught caution. The net earnings of the Great Northern were less in 1904 than in 1903; those of the Northern Pacific but a trifle more. It is only since 1904 that revenue statements would warrant generous expenditure. But in spite of this, the outlay that has been made for track, for improvements, for equipment, for terminals, has been immense. Take first a nine year period, with the expenditures for equipment alone. The figures follow: they cover the amount invested in equipment and its increase:

	June 30, 1897	June 30, 1906	Increase	Inc. Per Ct.
Great Northern	\$14,755,400	\$35,856,738	\$21,101,338	143
Nor. Pacific ...	12,924,209	31,887,225	18,963,016	146

The railroad managements determined to prepare for future growth even before the magnitude of their expenditures seemed to be justified. It requires the fullest comprehension and the firmest faith among those who issue orders from the general offices to authorize such a scale of outlay while the future is still in doubt. The following are the actual expenditures for the purposes named during the last four years; covering the period between June 30th, 1902, and June 30th, 1906.

	Great Northern	Northern Pacific
Improvements on existing lines (in real estate, second tracks, etc).	\$20,138,950.76	\$10,047,946.81
New roads and branch lines. . .	27,820,437.75	10,306,398.45
New equipment.	11,108,667.42	9,532,752.38
Seattle Terminal.	2,540,891.49	2,420,331.38
Total.	\$61,608,947.42	\$32,307,429.02

Here is a total of over \$90,000,000 paid out in the last four years for additions and improvements in the Northwest. In six months only, between the first of last July and the first of January, 1907, the Great Northern expended for equipment alone \$4,489,176.13. The total value of its equipment up to June 30, 1906, was \$35,856,738. Within six months just closed, therefore, it had added to its equipment plant more than 12 per cent; just one-eighth as much as had been accumulated in all the years of heavy growth and expansion. This is keeping up with the times.

In 1896 the Northern Pacific was just out of the hands of a receiver. For a time its expenses must be cautiously managed, and the property placed upon a stable financial basis. Yet in all that relates to equipment, to the provision of rolling stock to handle its traffic, the foregoing figures are proof that a liberal policy has been pursued. The additions to equipment ordered during the year 1906 footed up in value the handsome total of \$8,698,025.

Expenditure for the future will be on a still larger scale. The immense orders placed by the Northern Pacific for equipment have been mentioned. The cost of the locomotives and cars that it has already contracted for for 1907 delivery amounts to \$10,284,003. These outlays show at least a determined purpose to use resources freely in order to extend facilities. They are proportioned both to revenue and to the extraordinary demands made by the times. If the builders of cars and locomotives could fill orders without delay, there would be no lack of equipment today anywhere in the Northwest.

In addition to these colossal expenditures, the ordinary financial exigencies creep up apace. To mention only one item, that which is most intimately connected with the well-being of several million people and the communities where they live, the following figures show the steady increase in the wages of labor by a large and rapid advance in the total pay rolls.

	Great Northern Pay Roll	Nor. Pacific Pay Roll
1904.....	\$12,992,042	\$16,100,738
1905.....	13,036,392	15,908,604
1906.....	15,321,388	18,413,153

The cost of work all the time under way in reducing grades, lessening curves, relaying tracks, is immense. Because this is merely a betterment, it is overlooked; whereas it would attract public attention if it were original construction. In many cases it is more important and actually more expensive. In the improvement of its road which the Northern Pacific is now making between Staples and Moorhead, Minnesota, only, more earth will be moved than in the original grading of the line the whole distance from Carlton to Moorhead. The Great Northern, which recently reduced the grade of its line to Breckenridge, Minnesota, to .4 per cent, moved in that work double the amount of earth required in the first grading for the same track.

And so, in Montana, Washington and every state traversed by these systems, work is under way all the time which is unnoted but indispensable to the transaction of business, and often means the expenditure of more money than the construction of the line in the first place. The important work now under way on the Northern Pacific, to be finished in the next few years, will cost more than \$62,000,000. The Great Northern will spend at least as much in new construction.

These are some of the financial burdens that the railroads have to bear, some of the less generally heralded benefits which they confer upon the community. And the need of such constructive work increases throughout the entire Northwest. As rapidly as men and material can be obtained, and the shortage of labor is one of the most serious difficulties

that railroad managements have to contend with, work is being pushed everywhere throughout the Northwest. Grades come down, a second track is added where traffic gathers, new lines must be built to aid traffic that has no convenient outlet or that crowds upon the old routes,—everywhere it is a contest of energy and capital merely to supply the wants of a growing country, an increasing people, a more abundantly yielding soil. Not including the new railroad to be built from Portland to Spokane, the Northern Pacific will spend in 1907-1908 in the country west of the Rocky Mountains, between \$7,000,000 and \$8,000,000, and as much more east of them. The Great Northern will spend in planned improvements \$5,000,000 in the territory west of Spokane and \$6,000,000 east of that point.

These are big figures, the measure and expression of big achievements. Yet they are still below the needs of the time. What more must be done to solve fully the problem that has been stated?

VI

Great Issue Before the Country Summed up—New Tracks, New Terminals, Vast Expenditures Necessary—Must be Done in Partnership with the People.

Details of the transportation situation in the country and in the Northwest have been given, containing facts and figures from official sources, that make the truth clear to every unprejudiced mind. A brief summary of these and a consideration of the remedy to be applied to existing troubles must appeal to persons of fairness and intelligence everywhere. For the problem is a problem for the people as well as for the railroads; their interests stand or fall together. Only by the hearty cooperation of both forces can the right solution be worked out.

It has been seen that, during a period of unexampled prosperity, when every business in the country was growing as never before, all contributing more work for the common carrier, railroad building steadily declined. Roughly stated, the volume of railroad business increased one hundred and ten per cent, in the last ten years, while trackage increased twenty per cent. You cannot do fifty horse power work with a ten horse power machine. The difference must be made good.

This excessive demand upon transportation facilities has been concentrated, in the Northwest, into five years instead of ten; has become acute and phenomenal in the last two. Hence, all over the country, delays in transmission of goods, car shortages, complaints. Not only tracks but terminals are inadequate. Railroad yards in all the great cities are choked with cars awaiting transfer. The average mileage of each freight car is about twenty-five miles per day, the average speed from twelve to fifteen miles per hour. The freight equipment of the country is, by reason of this double congestion, rendering only a fraction of its potential service.

Confronted by an emergency, the railroads of the Northwest have met it with energy, boldness and liberality. They have increased motive power and car capacity to the limit of production in locomotive and car shops. They have utilized every pound of steam and every cubic foot of car space. They are spending from ten to twenty million dollars a year on new equipment. They are so operating their lines that the people of the Northwest get more service, more freight carried for each unit of equipment and each mile of road than do other sections where conditions are more favorable. All that men and money and technical skill and experience can do is being done to satisfy the needs of business.

This is not enough. It is clear that extraordinary

efforts must be made, plans of greater daring and more magnificent scope be executed, if business is not to suffer destruction from the comparative inadequacy of facilities. The whole country must have more tracks and enlarged terminals; and the Northwest, while actually suffering no more than other sections, needs its share.

The enlargement of terminals is enormously expensive. Existing grounds, as a rule, were obtained when land was cheap. Sometimes they cannot be extended at any cost. Large capital is always required. The Great Northern and the Northern Pacific have expended over five million dollars for terminals at Seattle. As much must be spent in the near future at St. Paul and Minneapolis to take care of passenger traffic alone. Large expenditures must be made at Tacoma for the same purpose. But there is greater need of more space for freight business; and that at every center and in every flourishing city on these lines. Time must be saved and money poured out freely. The cost of necessary terminals alone must be expressed in tens of millions.

One other factor in railroading deserves special mention at this time. Tracks and motive power must both lie idle unless there is an adequate supply of fuel with which to make steam. The coal shortage all over the west, from Los Angeles to Vancouver and from Salt Lake to Butte, Spokane and Portland, is very critical and none of the railroads has any margin today. If railroads are to run, the fuel supply must be enlarged. Montana produced 1,483,728 tons of coal in 1900; her product for 1905 is estimated at not more than 1,500,000 tons. Washington produced 2,209,012 tons in 1900; and only 2,818,042 tons in 1905, a trifling increase for five years. Compare these figures with the statistics of industrial growth and railroad expansion, and the vital nature of the fuel question at once appears.

The railroads can and will move fuel for the people of the states, but they cannot provide it. They cannot move their increased volume of business unless they get more coal themselves. The Federal Government has declared that they should not themselves engage in the coal business. It is indispensable, then, that capital outside of railroads should engage in furnishing, for people and railroads alike, a proper fuel supply. It should be made easy for coal to come in from British Columbia to the Northwest, where the supply is short, and new mines should be opened in Montana and Washington. This is an essential item in transportation and in all industrial problems, and it is one which the railroads, without outside assistance, are powerless to deal with as the circumstances demand today.

For work that will fall properly and directly upon the railroads, in addition to tracks and terminals that must be made if traffic is to be moved, what is required? The Great Northern, the Northern Pacific and the Burlington companies together operate about one-eleventh of the railroad mileage of the country. It would, on a fair computation, be necessary for them to raise and spend in the Northwest a total of \$500,000,000 in new work. That is what, in money terms, is involved in the elimination of present causes of complaint, in a due provision for the future. It is a demand that would stagger the Government of the United States. Even if spread over five years it would call for \$100,000,000 a year. It involves labor problems and problems in the obtaining of material and a thousand others that would tax executive energy if the money were ready on call. Confidence on the part of capital, labor, both skilled and unskilled in great quantities and for a prolonged period of time, and patience on the part of the public while difficulties are being overcome must combine to reach the happy end.

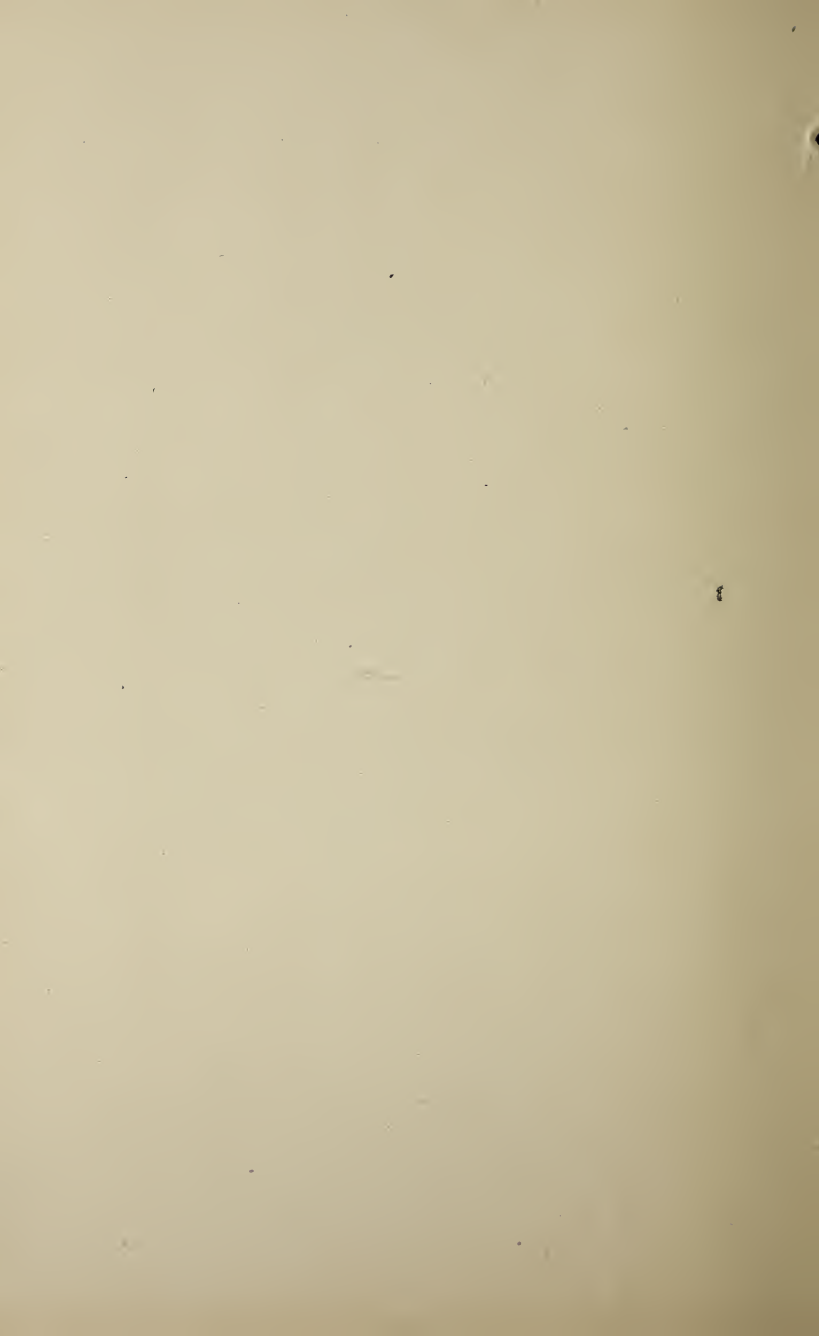
The railroads are going forward, facing this labor of Hercules undismayed. The Great Northern proposes to spend \$60,000,000 in improvements such as have been outlined at once. The Northern Pacific will spend as much or more. These systems must be double tracked, grades cut down, curvatures lessened, terminals enlarged. As it always has stood, so the Northwest will continue to stand, in the face of a new era, at the front in the fields of railroad construction and operation. Its transportation agencies will, if permitted, grapple with and master the conditions that are now threatening to smother industry; to stop the circulation of its blood and paralyze all its wholesome functions. What else is required?

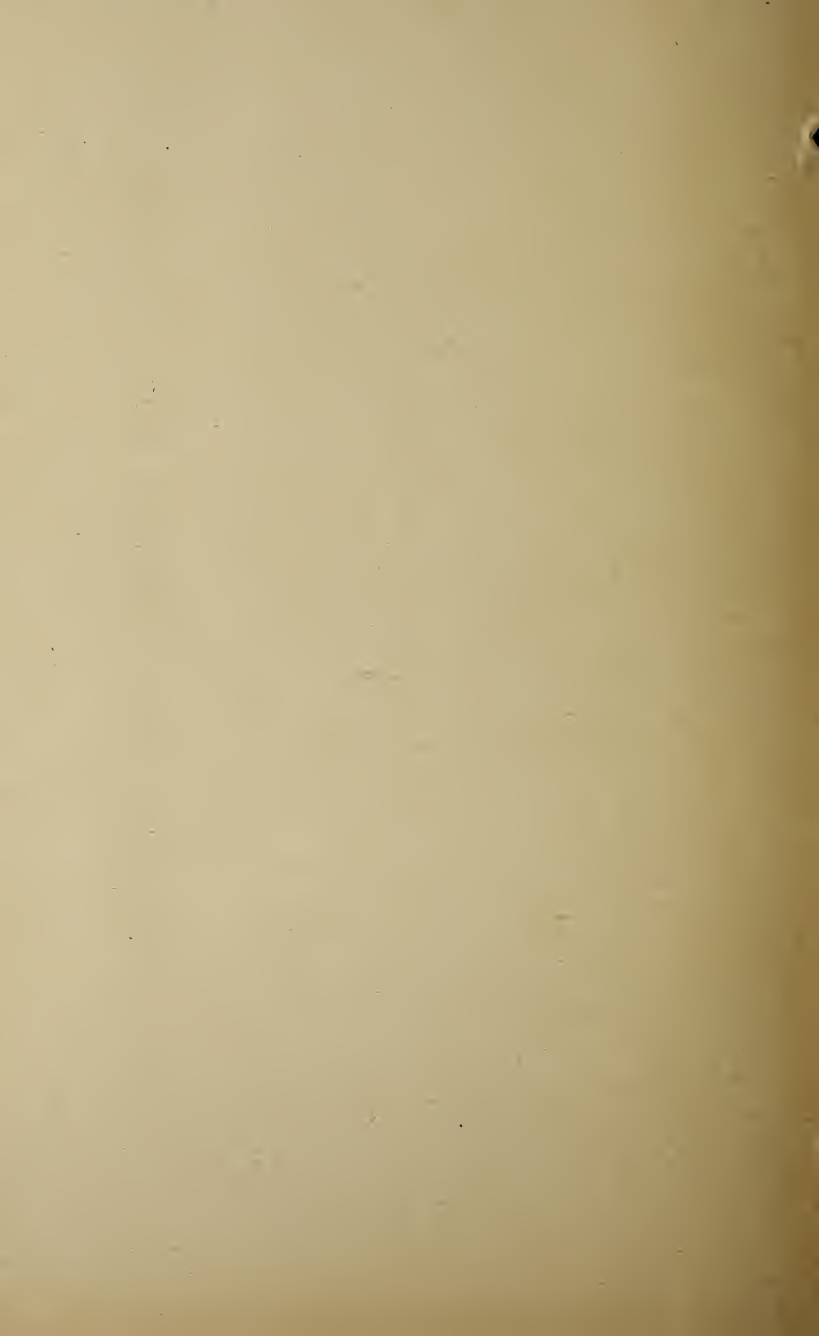
No such enterprise as this, covering an empire 2,000 miles long, dealing with the fortunes of several million people, affecting industries most jealous and diverse, calling for a credit of hundreds of millions with investors, can be achieved successfully except with the hearty sympathy and support of the people. It is, after all, their work. They are partners in it. They share the benefits, as witness this very prosperity which the building of railroads has so powerfully promoted. Nothing great and enduring was ever accomplished in this world by a house divided against itself. And never was there a time when fairness, intelligent appreciation of conditions and a willing support on the part of the people were so necessary or promised to them so large a return as now.

The people should tolerate no injustice where it has been proved to exist. They should insist upon just and equal treatment. They should not cherish unreasoning hostility against a partner in the firm; for by no possible action can the partnership between the people and the railroads be dissolved. The roads may be harassed in the performance of their great task by unjust and unreasoning attacks; they may be hampered or even forced to discontinue their work

of improvement; they may very easily, and this is most important of all, through the weakening of faith in all railroad investments, because the business is always under fierce fire, find credit so impaired among investors that the huge sums to be spent for the people's interests cannot be obtained. The American people are surely too fair, too sane, have too much appreciation of their own highest interests for that. For they, after all, would be the chief sufferers.

Though it deals in big figures and with partially unfamiliar terms, the whole situation is essentially simple. The cause of a malady creeping over business is discovered, the remedy is at hand. It can be applied successfully only by a close cooperation; by a mutual tolerance, understanding, good faith and instinct of helpfulness that shall put an end to the hostile attitude and forbid the endless iteration of malcontents whose work, at best, can only be destructive. The big task before the American people, before the people of the Northwest can be performed only by the laying aside of old differences, the celebration of a new compact of amity, the hearty pull together of the two partners and allies,—the people themselves and the railroads. In what spirit and with what action shall this emergency be met?







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